ABSTRACT OF THE DISCLOSURE

A spread spectrum detector employs a Doppler phase correction system that improves correlation of pseudo-noise (PN) codes to a received spread spectrum signal by combining phase shifts, in the time domain, to correlation values that compensate for the Doppler shift error that is inherent in the signal and that is imposed upon the signal by movement between the signal source and receiver. In architecture, the Doppler phase correction system includes a receiver to receive a spread spectrum modulated signal having the Doppler shift error, a multiplier to produce a plurality of complex first correlation values based upon the signal and a code. A phase shifter generates a plurality of complex second correlation values respectively from the first correlation values. The second correlation values being phase shifted by respective different amounts from corresponding first correlation values, so that the second correlation values exhibit less of the Doppler shift error than the first correlation values. The phase shifter can be implemented with a look-up table that stores a plurality of phase shift values, a counter that produces indices for the look-up table, and a multiplier that multiplies the phase shift values that are output from the look-up table with the first correlation values to produce the second correlation values. Finally, a combiner, such as an integrator, combines, or integrates, the second correlation values to derive a third correlation that indicates a degree of correspondence of the code with the signal.